

Docket No. 60,130-884

The Examiner further rejected claims 19-33 under 35 U.S.C. §103(a) as being obvious over Baumgartner et al. (United States Patent No. 5,568,845) in view of Angerfors (United States Patent No. 6,269,914). Baumgartner discloses a pneumatically operated disc brake including a traverse member 7 having two bores each with one internal thread into which adjusting spindles 70 and 71 can be screwed. As disclosed in column 7, lines 5 to 9 and shown in Figure 1B, a friction ring 80 is secured to the threaded bore of the traverse member 7 into which the spindle 70 is screwed and engages the threads of the spindle 70. The friction ring 80 is received by an additional angular part 81. Angerfors discloses a disc brake device including a tappet assembly 14 having a sleeve with an internal thread 23 which meshes with an external thread 24 of a second part. The second part has an extension 25 with a pressure head 29 which applies axial pressure on the outer surface of the brake pad units 10. An elastic sealing ring 41 creates a seal between the tappet assembly 14 and the extension 25.

There would be no benefit to combining an unthreaded portion as disclosed in Angerfors with the disc brake of Baumgartner. As disclosed in column 7, lines 4 to 15 of Baumgartner, as the inside diameter of the friction ring 80 is slightly smaller than the outside diameter of the adjusting spindle 70, the friction ring 80, which engages the threads of the adjuster spindle 70, creates a frictional torque on the adjusting spindle 70, preventing rotation of the adjusting spindle 70 when stressed by shaking. If the friction ring 80 was employed on an unthreaded portion as suggested by Angerfors, this benefit would be ruined as the effect of the friction ring 80 against the adjusting spindle 70 would be reduced.

Additionally, if Baumgartner included an unthreaded portion, the adjusting spindle 70 would have less threads. As the brake pads wear, the tappet assemblies are adjusted to compensate for wear. To ensure the friction ring 80 remains on an unthreaded portion of the adjusting spindle 70 when the brake pads are fully worn, a considerable length of threads must be removed from the adjusting spindle 70. Adding an unthreaded portion to Baumgartner would ruin this adjustment feature.

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Thus, claims 19-33 are in condition for allowance. No additional fees are seen to be required. If any additional fees are due, however, the Commissioner is authorized to charge Deposit Account No. 50-1482, in the name of Carlson, Gaskey & Olds, P.C., for any additional fees or credit the account for any overpayment. Therefore, favorable reconsideration and allowance of this application is respectfully requested.

Respectfully Submitted,

CARLSON, GASKEY & OLDS, P.C.



Karin H. Butchko

Registration No. 45,864

Attorneys for Applicant

CARLSON, GASKEY & OLDS, P.C.

400 West Maple Road, Suite 350

Birmingham, Michigan 48009

(248) 988-8360

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CERTIFICATE OF FACSIMILE

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, TC 3600, Before Final, 703-872-9326 on March 20, 2002.


Raimi Blackerby

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VERSION TO SHOW CHANGES MADE

CLAIMS

19. (AMENDED) A seal device for use in an adjustable tappet assembly for a disc brake for sealing between an internally threaded outer sleeve and an externally threaded internal shaft of the assembly, said device comprising a support element adapted to be carried by said sleeve, said support element carrying a seal for sealing between said sleeve and said shaft having a lip portion arranged to engage an unthreaded surface portion of said shaft in sealing relationship for providing sealing [a high integrity seal] during axial movement of said shaft relative to said sleeve.
24. (AMENDED) The seal device as recited in claim 23 [19] wherein said annular base houses an annular rim of said seal for sealing between said sleeve and said shaft.
25. (AMENDED) The seal device as recited in claim 23 [19] wherein said lip portion of said seal for sealing between said sleeve and said shaft extends axially away from said base and said sleeve.
26. (AMENDED) An adjustable tappet assembly for a disc brake comprising an internally threaded outer sleeve, an externally threaded internal shaft, and a seal device, said seal device having a support element carried by said sleeve, said support element carrying a seal for sealing between said sleeve and said shaft having a lip portion arranged to engage an unthreaded surface portion of said shaft in sealing relationship for providing sealing [a high integrity seal] during axial movement of said shaft relative to said sleeve.
31. (AMENDED) The assembly as recited in claim 30 [26] wherein said annular base houses an annular rim of said seal for sealing between said sleeve and said shaft.

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32. (AMENDED) The assembly as recited in claim 30 [26] wherein said lip portion of said seal for sealing between said sleeve and said shaft extends axially away from said base and said sleeve.